



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,492	06/14/2001	Karlheinz Dorn	P97,1389 02	7912
26574	7590	05/02/2006	EXAMINER	
SCHIFF HARDIN, LLP PATENT DEPARTMENT 6600 SEARS TOWER CHICAGO, IL 60606-6473			BENGZON, GREG C	
			ART UNIT	PAPER NUMBER
			2144	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/881,492

Applicant(s)

DORN ET AL

Examiner

Greg Bengzon

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This application has been examined. Claims 1-9,11-17 are pending. Claim 10 has been cancelled.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/16/2006 has been entered.

#### ***Priority***

This application is a continuation-in-part application of Serial No. 08/833303 filed June 27, 1997, and claims benefits of priority from said parent application.

The effective date of the subject matter described in the claims in this application (as presented in the amended claims submitted on August 27, 2001) is June 27, 1997.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9,11-17 are rejected under 35 U.S.C. 103(a) as being anticipated by Mason et al. (US Patent 5668998), hereinafter referred to as Mason, in view of Christensen et al. (US Patent 5881230), hereinafter referred to as Christensen.

With respect to Claim 1, Mason disclosed a medical system architecture, comprising: a modality for acquiring images, a means for processing the images, (Mason – Column 12 Lines 20-35) said means for processing includes a digital image system with a computer that works according to a standard for an object association method for data exchange between various application programs with graphical control elements and a standard for object association controls, (Mason – Column 11 Lines 30-45) wherein a standard for object association software component is allocated to every individual process limited by address space boundaries;(Mason – Column 9 Lines 55-60) including means for expanding the standard for object association software components with a remote control component for asynchronous communication (Mason – Column 2 Lines 35-45, Column 5 Lines 20-25) so that devices and processes can be remote controlled without any limitations caused by address space or computer

boundaries; and a means for the transmission of the images. (Mason - Column 1 Lines 35-55, Column 2 Lines 20-35, Column 4 Lines 20-65, Column 5 Lines 1-65, Column 7 Lines 1-15, Column 7 Lines 30-45)

Mason did not disclose (re. Claim 1) a medical system architecture including means for expanding the standard for object linking and embedding custom controls software components. Mason did not disclose (re. Claim 1) an application based on the MVC (Model-View-Controller) concepts.

Christensen disclosed (re. Claim 1) means for expanding the standard for object linking and embedding custom controls software components. (Christensen - Figures 4-7B, Column 2 Lines 30-65, Column 5 Lines 45-55, Column 7 Lines 10-35, Column 9 Lines 55-65) Christensen disclosed (re. Claim 1) an application using MVC (Model-View-Controller) concepts (as described by Applicant Specification Page 6) . (Christensen – Column 8 Lines 30-55, Figure 7) Christensen disclosed a model tier (database or network communication services) (Christensen-Figure 7A Item 118) , a view tier (client computer) (Christensen-Figure 7A Item 104), and a Control tier (business logic) (Christensen-Figure 7A Item 110).

Mason and Christensen are analogous art because they present concepts and practices regarding association, communication, acquisition, processing, formatting and presentation of remotely distributed objects such as digital images residing over a variety of devices having different formatting or storage standards. It is respectfully suggested that at the time of the invention it would have been obvious to a person of ordinary skill in the art to implement the teachings of Christensen regarding object linking and imbedding and remote automation into the system of Mason. The suggested motivation for doing so would have been overcome the following limitations the system of Mason, as described by Christensen (Christensen - Column 1 Lines 60-65, Column 2 Lines 1-30, Column 7 Lines 10-35, Column 13 Lines 1-65): 1) allow object references to objects on remote computers, and 2) to allow for a 3-tiered architecture that provides the ability to support a conceptual layer of business logic between the traditional 2-tier components of the client user interface and a server database.

Christensen explains as follows:

There are several problems associated with the existing OLE proxy/OLE channel/OLE stub model to maintain an object reference for client/server object applications that do not share memory. The OLE channel is not capable of sending information between client and server processes on different computers. In a distributed computing environment, client and server applications are typically located on different computers; therefore a client application cannot contain an object reference to a server application running on a remote computer. There is also no way to maintain object identity if an object reference was passed from a client object application to a remote server object application on a remote computer since object references are not known outside the local computer. This limits the ability of software developers to write distributed object applications using existing OLE and other object oriented frameworks.

The OLE proxy/OLE channel/OLE stub model also limits the ability of developers to create anything more than traditional two-tier client/server

applications. If a client application could contain references to more than one remote server application (i.e., on one or more remote computers), then three-tier, four-tier, and potentially N-tier client/server layering could be accomplished. Three-tier client/server object layering is desirable for many business applications (e.g., a first tier providing user services, a remote second tier providing business services, and a remote third tier providing data services).

The combination of Mason and Christensen disclosed Claim 2 - a system architecture according to claim 1, wherein said remote control component is an automation object communication interface. (Christensen - Figures 4-7B, Column 3 Lines 15-20)

The combination of Mason and Christensen disclosed Claim 3 - a system architecture according to claim 2, wherein the remote control ensues according to an automation object communication standard. (Christensen - Figures 4-7B , Column 12 Lines 55-65)

The combination of Mason and Christensen disclosed Claim 4 - a system architecture according to claim 1, wherein the remote control component is automation object communication component. (Christensen - Figures 4-7B , Column 2 Lines 30-55, Column 7 Lines 10-35, Column 12 Lines 35-65)

The combination of Mason and Christensen disclosed Claim 5 - a system architecture according to claim 1, wherein the remote control ensues with software-IC connections. (Christensen -Column 12 Lines 35-65)

The combination of Mason and Christensen disclosed Claim 7 - a system architecture according to claim 5, wherein the remote control component is a connectable/remote interface component. (Christensen - Column 9 Lines 55-65 )

The combination of Mason and Christensen disclosed Claim 9 - a system architecture according to claim 1, wherein said means for transmitting uses for data exchange the standard for object linking and embedding. (Christensen - Figures 4-7B ,Column 10 Lines 55 – 65) With respect to Claim 9, Mason disclosed a medical system architecture according to claim 1, wherein said means for transmitting uses for data exchange the standard for object association. (Mason - Column 4 Lines 20-65, Column 5 Lines 1-65)

The combination of Mason and Christensen disclosed Claim 11 - a system architecture according to claim 1, further comprising: means for use of software component technology for producing components for graphic user interfaces contained within a process. (Christensen - Column 12 Lines 1-65) With respect to Claim 11, Mason disclosed a medical system architecture according to claim 1, further comprising: means for use of software component technology for producing components for graphic user interfaces contained within a process. (Mason - Column 7 Lines 1-15)

The combination of Mason and Christensen disclosed Claim 12 - a system architecture according to claim 1, further comprising: means for combining software component technology with standard for object linking and embedding Automation for distributed propagation of an event within a control level and between the control levels. (Christensen - Column 13 Lines 1-65)



The combination of Mason and Christensen disclosed Claim 13 - a system architecture according to claim 1, further comprising: means for combining software component technology with software-IC connections for the distributed propagation of an event within a control level and between the control levels. (Christensen - Column 13 Lines 1-65)

With respect to Claim 6, the combined teachings of Mason and Christensen substantially disclosed the medical system architecture according to claim 1, wherein the remote control ensues according to the ATOMIC standard. The Examiner notes that Mason and Christensen have overlapping disclosures on related subject matter regarding the ATOMIC standard, as presented below.

For the purposes of this Examination, the ATOMIC standard is interpreted by the Examiner to mean an Asynchronous Transport Optimizing observer-pattern-like system supporting several Modes for an Interface-Definition-Less Communication subsystem, as described by the Applicant in US patent application 08/676859 (issued as US Patent 6275871).

The Examiner notes that the ATOMIC system is a location and protocol transparent object oriented communication system that implicitly encodes and decodes transferred data, if the connected peers reside on hosts with different internal data representation. (See Christensen Column 10 Lines 20-35; See Mason Column 8 Lines

1-25) In said ATOMIC system, the communication endpoints that use the same address – a character string (also called 'pattern') – are logically connected. (See Christensen Column 7 Lines 10-45, Column 8 Lines 45-65, Column 9 Lines 1 –40; see Mason Column 4 Lines 20-25) The ATOMIC system supports two communication modes – an event propagation mode (PUSH mode and PULL modes) and a classic client/server mode using RPC. (See Christensen Column 10 Lines 50-65; See Mason Column 2 Lines 25-65, Column 6 Lines 15-25)

The ATOMIC system uses hook routines, (supplier side and consumer side) and macros to create a subset of data members that are to be transferred, and to effect data conversion between both endpoints. Mason describes the use of user handlers and provider handlers called Service Class User (SCU) and Service Class Provider (SCP), respectively. Mason disclosed of DTInitConfig, DTUserHandler, DTServiceInterface, DTServiceProviderHandler that are very similar to the ATOMIC DECLARE\_MSC and IMPLEMENT\_MSC Macros. Mason disclosed of checking rules and creating element lists for data transfer requests. (see Mason Column 6 Lines 1-10, Column 7 Lines 50-65, Column 8 Lines 1-65, Column 9 Lines 1-65, Column 10 Lines 1-65). Christensen describes the use of RA Proxy Object, RA Stub Object, OLE Proxy Object, and OLE Stub Object in the context of Remote Automation applications (Christensen Figures 4-7B). Christensen disclosed of 'marshalling' to effect data conversion, byte swapping to conform to another CPU format, resolving local references, and handling pointers. (see Christensen Column 10 Lines 25-45, Column 11 Lines 1-65). Christensen disclosed

that a reference thread is established to resolve all references to remote objects on the remote server computer. The common reference thread eliminates the complicated object lookup from multiple reference threads. (Christensen - Figure 3, Column 11 Lines 50-65)

With respect to Claim 8, the combined teachings of Mason and Christensen, when applied together, substantially disclose a medical system architecture according to Claim 6, wherein the remote control component is a connectable/remote interface component. (Christensen - Column 9 Lines 55-65, Column 10 Lines 1-65)

With respect to Claim 14-17, the combined teachings of Mason and Christensen substantially disclosed wherein each of said three tiers are contained in various combinations of processes. (Christensen-Figure 7a) The Examiner notes that in a distributed object programming environment such as taught by Mason and Christensen, the software components may be implemented in separately distinct or integrated processes, in any combination desired.

***Response to Arguments***

Applicant's arguments filed 03/16/2006 have been fully considered but they are not persuasive.

The Applicant presents the following argument(s) [*in italics*]:

*A communication mechanism between two applications is specified in Mason et al. as well as in Christensen et al. ...In contrast to this, in the present patent application, the architecture for an application corresponding to the MVC concept (model view controller) is specified. ATOMIC is thereby used for this as a communication mechanism between individual software components of an application.*

The Examiner respectfully disagrees with the Applicant. While it's true that Mason and Christensen teach communication between applications, both Mason and Christensen also disclose communication between individual software components of an application. The Examiner notes that in a distributed object environment, a software component and an application may exist as one and the same object, since each distributed object may be re-used in different ways.

The Applicant presents the following argument(s) [*in italics*]:

*The communication ensues synchronously in Mason et al. and Christensen et al., while the communication runs asynchronously with the present invention.*

Mason disclosed asynchronous communication (Mason – Column 13 Lines 35-40).

The Applicant presents the following argument(s) [*in italics*]:

*Mason et al, describes "processing the images", i.e. a manipulation of the DICOM attributes. This does not correspond to images processing such as, for example, 3D or cardiac evaluation etc.*

The Examiner notes the features upon which applicant relies (i.e., *3D or cardiac evaluation*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. There is also no support in the Applicant Specifications for 3D or cardiac evaluation.

### **Conclusion**

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part

of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

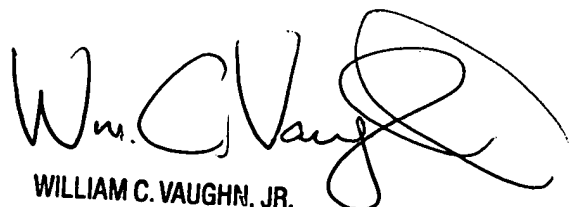
In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gcb



WILLIAM C. VAUGHN, JR.  
PRIMARY EXAMINER